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ABSTRACT

This paper describes the scope and findings of a separately published comprehensive review of research on optimum age of entry into first grade, covering the literature from 1915 to 1976. (Not included was research on reading, the gifted, mentally retarded, and materials in popular journals.) Findings noted the inadequacy of chronological age as a predictor and indicated an optimum mental age of 6 1/2 years for most cases. Also noted: disadvantage to the child younger than his peers; developmental patterns in visual ability to deal with the printed word; variations of as much as five years in reading readiness at age 6; ineffectiveness of early intensive drill in learning to read; correlation between maturity and learning to read; higher incidence of social, emotional and scholastic problems among younger children than among comparable children a year older; benefits from additional kindergarten experience; and need for entry decisions on an individual basis. The findings and conclusions are listed under separate headings for the following criteria: chronological age, mental age, IQ, sex, physiological development, social and emotional development, and relative age. Effects of early admission are described, and early entry and reading are discussed briefly. (BF)

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At What Age Should Children Enter First Grade: A Comprehensive Review of the Research

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Purpose: The purpose of this review is to reduce the confusion surrounding the issue of optimum age of entry into first grade in American public schools. This is a relevant question if the assumption is accepted that, as most public schools are currently organized, the child must be ready for the school rather than the school's being ready for the child. Were it the case that schools seek to and have the resources to provide the specific nurturing environment each child is deemed to need, the issue would disappear.

Procedure: The literature was searched in an effort to locate all published references in the professional journals from the early 1900's to 1976. Some 200 relevant articles in the professional literature, a dozen dissertations, several masters theses, a number of ERIC documents, a few State Department of Education monographs, several unpublished papers, and a number of books and pamphlets were located. Not examined was the vast core of research on reading, on the gifted, and on the mentally retarded except as those identified pertain to the issue. Nor was any organized effort made to examine the popular journals although several references did appear during the literature search.

It is recognized that some materials will have been missed, particularly the unpublished research of large school districts. Fortunately, some of the more elaborate of these latter studies have been published. It is hoped that no major piece of published research has been overlooked; if so, I will appreciate its being brought to my attention.

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The results appear in two documents:

1. When Should Parents Delay Entry of Their Child Into the First Grade? Florida Educational Research and Development Council: Research Bulletin, Vol. 11, No. 1, Fall 1976. Gainesville, Florida. 38p.

2. At What Age Should Children Enter First Grade: A Comprehensive Review of the Research. Published by University Microfilms International, Ann Arbor, Michigan, 1977. 194 p.

The first document listed above is a distillation of the major findings written for parents and teachers. The second reference is much more comprehensive including the complete bibliography, definition of issues and a discussion and analysis of the findings.

No organized procedure for evaluating the research was employed. However, whenever an especially strong study was discovered, favorable comment was made; when bias or an unsound research design was detected, note was made to this effect.

Problems Encountered:

It was necessary to go back to the original research document whenever possible. In some instances, for example, the data tended to have been selectively drawn upon in reaching conclusions. In other instances, a particular study quoted by many writers over the years was discovered to have an extremely small n in a non-representative or atypical situation. In others, comparisons were made between children above average in mental ability selected for special treatment and the remainder of the students without partialing out this initial discrepancy in the statistical analysis. In still other studies, children for above average in mental ability but performing only slightly above average in academic achievement were cited as evidence of the desirability of early school entry. Close analysis of the data frequently revealed that delayed entry would probably have resulted in far above average

achievement of these children coupled with a much reduced failure rate.

The author's bias was a problem. Frankly, my personal predilection was to demonstrate that many children are at a disadvantage in first grade as first grades are presently organized for instruction. That is, my thesis was that the majority of first grades have internalized the norm of expecting each child to learn to read during his first grade experience, preferably by Christmas, or else be labeled as a slow learner, dumb, culturally deprived, disadvantaged, etc. To counteract this recognized bias, I have cited the actual page reference of each quotation or paraphrase in the second document mentioned above thus enabling the reviewer to easily check the accuracy of all statements and the context in which they are located. Conclusions at variance with my own have been analyzed through careful examination of the data when these were available. It is felt that, overall, the treatment is both comprehensive and reasonably objective.

Findings and Conclusions:

These are listed under a number of headings below:

Chronological Age as a Criterion:

1. It remains the most commonly used criterion and it promises to remain the most commonly used criterion for some time.

2. By itself, it is not adequate to insure the parent that his/her child will succeed in first grade.

3. It is only a very general indicator that suggests that older "normal" children will, given school tasks, tend to do better with those tasks than they would have a year earlier.

4. It is administratively the most straightforward and most objective criterion in the sense that it is discrete and measurable.

5. It does not resolve all the administrator's admission problems.

6. In all cases additional criteria other than age should be used in some combination in making individual decisions about the child.

7. It is crucial to make an individual decision in those schools in which the child must fit into and adapt to the school rather than the school's being prepared to adapt to him.

8. It is unwise for school administrators to rely so heavily on this one single criterion because the evidence is that many children encounter difficulty from being entered too young.

Mental Age As a Criterion:

1. Half a century of research has reported mental age as a significant factor to be included in determining the readiness of a child for entry to first grade.

2. By itself, mental age is not sufficient to assure the parent that his/her child will succeed in first grade.

3. To maximize the probability of success in first grade, the mental age should be 6 years, 6 months or more.

4. Those school systems which are admitting children who are 6 years old by January 1 of the academic year in which they are admitted, are admitting more than half of the children in the school population when their mental ages are less than the recommended 6 years, 6 months. This is risky; it means children will encounter failure who could have had a successful experience.

5. In all instances, criteria other than mental age should also be considered in combination in the making of individual decisions.

6. In school systems which administer intelligence tests, mental age is a straightforward and reasonably objective criterion. While recent research has thrown the concept of mental age into some disrepute, i.e. it is now understood to be a global, somewhat fuzzy concept, which can be broken down into more discretely measurable factors, still and all for many school systems it remains a feasible and practical concept in the absence of more elaborate and sophisticated measurements.

IQ as a Criterion for Admission:

1. IQ is an inadequate criterion by itself. While very bright children may be ready for first grade; they may not be. IQ is a necessary, but not sufficient indicator of success.

2. Despite the criticism in recent years about the discriminating characteristics of IQ tests, IQ remains one indicator of success in that it assesses the readiness of children for what teachers stress in school, i.e. reading and arithmetic.

3. Of children with the same IQ, the somewhat older child has the advantage in mental age and in physiological development.

4. Other things being equal, the truly gifted child will do better than the "regular" or "normal" children. At the same time, when compared against themselves, had they waited another year, the underage child who is very bright is apt not to be a full year further along in achievement.

5. IQ is an administratively feasible criterion. However, because of its labeling effects, IQ is not as desirable a criterion as mental age.

Sex as a Criterion for admission:

1. As with each of the other ceiteria, sex is a necessary criterion, but not a sufficient one.

2. There are differences in rate of development of boys and girls, differences that are significant at age six.

3. These differences tend to diminish over time so that somewhat after puberty, they have disappeared.

4. We are not sure how much of the differences that do exist are cultural against genetic.

5. The overlap between the sexes is great but the variation within each sex is even greater.

6. Any arbitrary cutoff date, older for boys than girls, would discriminate against some boys and also against some girls.

7. The incidence of reading problems in the elementary grades seems consistently to be higher for boys than for girls. Whether this is due to the curriculum's being more appropriate for girls than boys, we are unsure.

Physiological Development as a Criterion:

1. Children develop normally at vastly different heights and weights and the significance of these outside of how they effect the child's peers and thus he, himself indirectly have little or nothing to do with his reading readiness.

2. There is evidence that both development of wrist bone and stage in teething are related to the total developmental pattern of the child.

3. There is evidence of a developmental pattern in the facility with which the eyes can deal with the printed word.

4. As with the previously discussed criteria, by themselves these factors do not add up to a physiological age index that can be used with assurance.

Social and Emotional Development as Criteria:

1. Some young, bright children do succeed with early entry, in their adjustment as well as their achievement.

2. As the entry age is lowered, the odds increase that the child will have more difficulty than he would have had at a somewhat older age.

3. Careful and intensive screening on all factors is a must to maximize the probability that those entered early will be able to cope.

4. IQ by itself is no guarantee that the child is ready socially or emotionally.

5. The kind of program the child is going to be placed into is a significant factor to be considered in early entry.

6. Children evidence behaviors that if detected, enable their reassignment or withdrawal from the school program.

7. The age relative to the ages of the others is a factor.

It is this latter criterion that we will briefly examine in the next section.

Relative Age as a Criterion:

As indicated earlier, Weinstein's study focused on the relationship between relative school entrance age and adjustment. Her conclusion was

> These studies clearly demonstrate the importance of relative school entrance age to the later adjustment of the child. Children who start first grade young compared to their classmates are more likely to be referred to a residential treatment center. If they remain in public school, they are more likely to be seen as emotionally disturbed by school personnel. If they are not seen as disturbed by the school, they are more likely to fail a grade and to be rejected by their classmates than other non-disturbed children.

The Effects of Early Admission:

1. Research supports the conclusion that children entering kindergarten under five years of age, or entering first grade under six years of age, tend to have more scholastic, social and emotional problems than children entering at an older age.

2. The reviewed research studies reveal that no matter what the entrance age limit may be, the children who enter at the earliest possible age have more problems and achieve less than those of equal IQ who enter at the top of the legal entrance age range.

3. There is definite evidence that sex differences favoring girls exist in small quantities and in various areas, but they are not as great as the variations among boys as a group and among girls as a group

Early Entry and Reading:

1. Children vary widely, as much as four or five years at age six, in their reading readiness.

2. Early, unrewarding, unsatisfactory experiences with reading involving failure or threat of failure interfere with subsequent success in learning to read.

3. Early family experiences of the child have a greater effect on his intellectual development than his formal schooling.

4. Children learn best when the home and school are in agreement on and share in the educational experiences of the child.

5. Early intensive drill on learning to read is not only ineffective or useless, but even detrimental to children.

6. Much of the press for early emphasis on formal reading derives from parental rather than child needs.

7. Some children can be taught to read and write earlier than six or seven years of age, but the effort required is much greater than will be required at a later age.

8. The most important ingredient for child success is continuing and deep love of the child for himself.

9. Large numbers of our children are being psychologically "turned off" in first, second and subsequent grades for reasons we understand but are doing nothing about.

10. Children are most apt to do well in school if their minds are allowed to develop freely during the early years.

11. Research has yielded a large number of specific indicators of a child's readiness for formal reading.

12. Large numbers of our children are overplaced one or more grade levels--particularly in first grade, i.e. they are immature for the grade they are in.

13. There is a clear correlation between maturity, i.e. the child's stage of development, and his success in learning to read.

14. Much of the failure children experience in reading is a function of home and school rather than a function of any innate incapacity in the child.

15. Most children should have a mental age of at least six and one half before beginning formal reading experiences.

16. Approximately half of the children admitted to first grade before age six and one half years would profit from an additional year of kindergarten type readiness experiences.

17. Chronological age as an indicator of readiness to learn to read is of only limited value--other factors must be considered in conjunction with the child's age.

18. An array of developmental, behavioral indicators (factors) should be considered in ascertaining the child's readiness for formal reading instruction.

19. For each child, the decision should be an individual one, worked out when possible between parents and school.

Summary: In the book, the second reference listed earlier, a series of recommendations for avoiding or reducing the deleterious effects of too early entry is given. These are not given here both for space reasons and because they do not bear on the main thrust of the paper.

The main finding of this entire document has been that earlier is not necessarily better. There is no rush. Childhood has value for itself. Children vary in their rates of growth and development. Each child tends to have his own growth cycle. Children should not always be considered as in a race to walk first, talk first, and read first. To do this is to spell misery and unhappiness for all but the few--and even those few will have to keep looking back to make sure no one is gaining on them!